



amtec

**Valve tests according to
DIN EN ISO 15848-1 (April 2006),
VDI 2440 (November 2000), and
user defined procedures**



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valid from 2013-08

Test according to ISO 15848-1 for on-off valves (CO1)

- Valve size: max. DN150/PN250 bzw. DN250/PN25
- Assembly of the valve in the test rig
- (1) Preliminary test at RT: Leakage measurement at the valve stem and the body seal
- (2) 125 mechanical cycles at RT, leakage measurement at the valve stem
- (3) Adjust test temperature, leakage measurement at the valve stem
- (4) 125 mechanical cycles at test temperature, leakage measurement at the valve stem
- (5) Cooling down to RT, leakage measurement at the valve stem
- Repeat steps (2) to (4)
- (6) Cooling down to RT, leakage measurement at the valve stem and the body seal

Test according to ISO 15848-1 for on-off valves (Extension CO2)

- Continuation of the test after finish CO1
- (2) 500 mechanical cycles at RT, leakage measurement at the valve stem
- (3) Adjust test temperature, leakage measurement at the valve stem
- (4) 500 mechanical cycles at test temperature, leakage measurement at the valve stem
- (6) Cooling down to RT, leakage measurement at the valve stem and the body seal



Test according to ISO 15848-1 for on-off valves (Extension CO3)

- Continuation of the test after finish CO2
- (2) 500 mechanical cycles at RT, leakage measurement at the valve stem
- (3) Adjust test temperature, leakage measurement at the valve stem
- (4) 500 mechanical cycles at test temperature, leakage measurement at the valve stem
- (6) Cooling down to RT, leakage measurement at the valve stem and the body seal

Test according to ISO 15848-1 for control valves (CC1)

- Valve size: max. DN150/PN250 bzw. DN250/PN25
- Assembly of the valve in the test rig
- (1) Preliminary test at RT: Leakage measurement at the valve stem and the body seal
- (2) 5,000 mechanical cycles at RT, leakage measurement at the valve stem
- (3) Adjust test temperature, leakage measurement at the valve stem
- (4) 5,000 mechanical cycles at test temperature, leakage measurement at the valve stem
- (5) Cooling down to RT, leakage measurement at the valve stem
- Repeat steps (2) to (4)
- (6) Cooling down to RT, leakage measurement at the valve stem and the body seal



Test according to ISO 15848-1 for control valves (Extension CC2)

- Continuation of the test after finish CC1
- (2) 20,000 mechanical cycles at RT, leakage measurement at the valve stem
- (3) Adjust test temperature, leakage measurement at the valve stem
- (4) 20,000 mechanical cycles at test temperature, leakage measurement at the valve stem
- (6) Cooling down to RT, leakage measurement at the valve stem and the body seal

Test according to ISO 15848-1 for control valves (Extension CC3)

- Continuation of the test after finish CC2
- (2) 20,000 mechanical cycles at RT, leakage measurement at the valve stem
- (3) Adjust test temperature, leakage measurement at the valve stem
- (4) 20,000 mechanical cycles at test temperature, leakage measurement at the valve stem
- (6) Cooling down to RT, leakage measurement at the valve stem and the body seal

Valve test procedure acc. to VDI 2440

- Valve size: max. DN150/PN250 bzw. DN250/PN25
- Assembly of the valve in the test rig
- Preliminary test at RT: short term leakage test
- Heating up to max. 400 °C
- Stem cycles at test temperature (1,000 pcs.)
- Tightness test 24 hours, test medium Helium, test pressure max 160 bar,
- Disassembly after test
- Evaluation of test results



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Valve tests



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Additional options for valve tests acc. to VDI 2440

- Additional stem cycles, 1,000 pcs.
- Additional temperature cycle
- Additional leakage measurement 24 h test medium Helium, test pressure max 160 bar,
- Additional charge medium nitrogen
- Additional charge medium methane

Preparation

- of the valve (vacuum chamber, connection to the actuator, flange sealings, mounting temperature sensors)
- of the test rig (gas connection, heating, isolation)

Test Report

- englisch or german

Certificate / Confirmation

- englisch or german

Special tests, Leakage tests and long term tests on request.